

	L #	Hits	Search Text	DBs	Time Stamp
1	L1	3896	((427/595-597,561) or (219/121.85,121.61,121.62)).CCLS.	USPAT; US-P GPUB ; EPO; JPO; DERW ENT; IBM TDB	2003/10/01 14:35
2	L2	939	(pulse\$2 pulsing intermittent) near2 (laser (light IR infrared photon)adj (beam ray stream)) near2 (ablation etch\$4 evaporat\$4)	USPAT; US-P GPUB ; EPO; JPO; DERW ENT; IBM TDB	2003/10/01 14:40
3	L3	95	1 and 2	USPAT; US-P GPUB ; EPO; JPO; DERW ENT; IBM TDB	2003/10/01 14:41
4	L4	931	(pulse\$2) near2 (laser) near2 (ablation etch\$4 evaporat\$4)	USPAT; US-P GPUB ; EPO; JPO; DERW ENT; IBM TDB	2003/10/01 14:41

SN 10/059,978

	L #	Hits	Search Text	DBs	Time Stamp
5	L5	95	1 and 4	USPA T; US-P GPUB ; EPO; JPO; DERW ENT; IBM TDB	2003/10/0 1 14:42
6	L6	20203	absorption adj spectrum	USPA T; US-P GPUB ; EPO; JPO; DERW ENT; IBM TDB	2003/10/0 1 14:42
7	L7	5	3 and 6	USPA T; US-P GPUB ; EPO; JPO; DERW ENT; IBM TDB	2003/10/0 1 14:43
8	L8	31	3 and (IR infrared)	USPA T; US-P GPUB ; EPO; JPO; DERW ENT; IBM TDB	2003/10/0 1 14:43

	L #	Hits	Search Text	DBs	Time Stamp
9	L11	64	3 not (9 or 10)	USPA T; US-P GPUB ; EPO; JPO; DERW ENT; IBM TDB	2003/10/0 1 14:44
10	L9	5	7 and 8	USPA T; US-P GPUB ; EPO; JPO; DERW ENT; IBM TDB	2003/10/0 1 14:58
11	L10	26	8 not 9	USPA T; US-P GPUB ; EPO; JPO; DERW ENT; IBM TDB	2003/10/0 1 14:48
12	L12	26	10 and (laser fs ps ns femtosec picosec nanosec femto pico nano)	USPA T; US-P GPUB ; EPO; JPO; DERW ENT; IBM TDB	2003/10/0 1 15:00

	L #	Hits	Search Text	DBs	Time Stamp
13	L13	23	10 and (laser same (fs ps ns femtosec picosec nanosec femto pico nano))	USPA T; US-P GPUB ; EPO; JPO; DERW ENT; IBM TDB	2003/10/0 1 15:01
14	L14	36	11 and (laser same (fs ps ns femtosec picosec nanosec femto pico nano))	USPA T; US-P GPUB ; EPO; JPO; DERW ENT; IBM TDB	2003/10/0 1 15:01

L15 (4) / 3 and vibrational

L9

4

	Document ID	Issue Date	Title	Current OR	Inventor
1	US 2003014 3326 A1	20030731	Deposition of thin films using an infrared laser	427/248.1	Bubb, Daniel et al.
2	(D311) A Seventy-5 th embodiment... Fig. 113... an analysis US 6110291 A DIV 4 5,082,567	20000829	Thin film forming apparatus using laser	118/726	Haruta, Kenyu et al.
3	(D302) A 73 rd embodiment... US 6033741 A DIV 4 08/158,804	20000307	Thin film forming apparatus using laser	427/596	Haruta, Kenyu et al.
4	US 5622567 A	19970422	Thin film forming apparatus using laser	118/726	Kojima, Kazuyoshi et al.
5	US 5538767 A	19960723	Method for growing transparent conductive GaInO.s ub.3 films by pulsed laser deposition	427/596	Cava, Robert J. et al.
(D10) Fig. 4...absorp spec of typical product made...					

Source

15

absorp spec
IR photo of the phone
155 pages

154 pages

154 pages

5

pull

pull

ultrasound
LIS

4(b)

	Document ID	Issue Date	Title	Current OR	Inventor
1	US 2003014 3326 A1	20030731	Deposition of thin films using an infrared laser	427/248.1	Bubb, Daniel et al.
2	[0053] Whitcomb, et al. US Fed. 2/8/02 2002012 2898 A1 CIP → DIV	20020905 - 6/7/15	Generation of viable cell active biomaterial patterns by laser transfer	427/597	Ringeisen, Bradley R. et al.
3	C. 36 - mech. vibration adjustment US 2002010 6461 A1 ECM. 6/4/06, 7/4/5 6/16/00	20020808	Methods for coating particles and particles produced thereby	427/596	Talton, James D.
4	[0062] US 2002007 1901 A1 CIP	20020613	Generation of biomaterial microarrays by laser transfer	427/2.1	Ringeisen, Bradley R. et al.

7 [0053]
10/068, 315 =

→ evap via electronic sublimated expected

[0088] 193 nm
[0090] at
[0096]
30 ns laser pulses
PE = 150 mJ/cm²

Stano
f.d.

210

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	Document ID	Issue Date	Title	Current OR	Inventor
1	US 20030017277 A1	20030123	Jetting behavior in the laser forward transfer of rheological systems	427/596	Young, Henry Daniel et al.
2	US 20030003241 A1	20030102	Depositing method and a surface modifying method for nano-particles in a gas stream	427/475	Suzuki, Nobuyasu et al.
3	US 20020197401 A1	20021226	Laser forward transfer of rheological systems	427/248.1	Auyeung, Raymond C.Y. et al.
4	US 20020125230 A1	20020912	Method for minimizing sample damage during the ablation of material using a focused ultrashort pulsed laser beam	219/121.69	Haight, Richard Alan et al.

[0028] 10 psec ultra short pulses
 [0045] $\lambda = 800 \text{ nm}$
 200 fs pulses
 [0035] pulses 150 fs - 7 ns

+

6

215
#2 =L15
#4 =

	Document ID	Issue Date	Title	Current OR	Inventor
5	US 20020122898 A1	20020905	Generation of viable cell active biomaterial patterns by laser transfer	427/597	Ringeisen, Bradley R. et al.
6	US 20020071901 A1	20020613	Generation of biomaterial microarrays by laser transfer	427/2.1	Ringeisen, Bradley R. et al.
7	US 6562417 B2	20030513	Depositing method and a surface modifying method for nano-particles in a gas stream	427/566	Suzuki, Nobuyasu et al.
8	US 6509070 B1	20030121	Laser ablation, low temperature-fabricated yttria-stabilized zirconia oriented films	427/572	Voevodin, Andrey A. et al.

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	Document ID	Issue Date	Title	Current OR	Inventor
13	US 6214712 B1	20010410	Method of physical vapor deposition of metal oxides on semiconductors	438/591	Norton, David P.
14	US 6177151 B1	20010123	Matrix assisted pulsed laser evaporation direct write	427/596	Chrisey, Douglas B. et al.
15	US 6156030 A	20001205	Method and apparatus for high precision variable rate material removal and modification	606/10	Neev, Joseph
16	US 6025036 A	20000215	Method of producing a film coating by matrix assisted pulsed laser deposition	427/492	McGill, Robert Andrew et al.

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(D40) Any substrate in UV to IR

(Dr 7) Fig 3a 358fs 2 pulse reg 11ns

Fig 3b) 15ns, 151-APF

pull

(Pr 9) Fig 3c) - IR laser pulsed

(Dr 10) 358fs laser

- Cure as skin for print

7

	Document ID	Issue Date	Title	Current OR	Inventor
9	US 6472030 B1	20021029	Preparation of laser deposited oriented films and membranes	427/597	Balkus, Jr., Kenneth J. et al.
10	US 6395350 B1	20020528	Mesoporous transition metal oxide thin films and methods of making and uses thereof	427/556	Balkus, Jr., Kenneth J. et al.
11	US 6372306 B1	20020416	Ferroelectric materials with chemical formula $A(1-x)B_xC(1-y)DyF_3$, and fabrication thereof	427/596	Smith, Robert W. et al.
12	US 6287645 B1	20010911	Preparation of laser deposited oriented films and membranes	427/597	Balkus, Jr., Kenneth J. et al.

all 12
excimer laser w/
14 ns pulses

Table I
excimer laser 193 nm
30 ns pulses, 5 Hz
all Fed 9/20/97

not
in
50-50

11.

	Document ID	Issue Date	Title	Current OR	Inventor
26	US 4687539 A	1987081 8	End point detecti on and control of laser induced dry chemica l etching	216/60	Burns, Francis C. et al.

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	Document ID	Issue Date	Title	Current OR	Inventor
21	US 5098737 A	19920324	Amorphi c diamond material produce d by laser plasma deposit ion	427/524	Collins , Carl B. et al.
(D2) Turn to Figs. 2 Nol. Vaz 15 as page wy	US 5002798 A	19910326	Method for forming thin solid lubrici ous films and film article s made thereby	427/596	Donley, Michael S. et al.
23	US 4987007 A	19910122	Method and apparatus for produci ng a layer of material from a laser ion source	427/526	Wagal, Suhas S. et al.
(b12) In a paper 10 as page 10 as page 10 as page	US 4987006 A	19910122	Laser (transfe r deposit ion	427/597	William S, Richard T. et al.
24	US 4932747 A	19900612	Fiber bundle homogen izer and method utilizi ng same	385/115	Russell , Stephen D. et al.

absorption coefficient of polymer at 308nm
15----

	Document ID	Issue Date	Title	Current OR	Inventor
17	US 5747120 A <i>PLD w/ US 44</i>	19980505	Laser ablated hard coating for microtools	427/596	McLean, II, William et al.
18	US 5406906 A <i>(D9) Beyond 4000 351nm Excimer w/ 20ns pulse</i>	19950418	Preparation of crystallographically aligned films of silicon carbide by laser deposition of carbon onto silicon	117/92	Rimai, Lajos et al.
19	US 5192580 A <i>(D18) This Ex. shows IR Spectra</i> <i>(D22) A Teflon IR Spectra</i>	19930309	Process for making thin polymer film by pulsed laser evaporation	427/596	Blanchett-Fincher, Graciela B.
20	US 5158931 A <i>D</i>	19921027	Method for manufacturing an oxide superconductor thin film	505/474	Noda, Etsuo et al.

Polym. film

Nd-Yag 6-7ns pulse

5